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FreeListing: Insights into university students' categorization of drinks, emotions, friendship, and success in Hungary, Jordan, and Türkiye

This study used the freelisting method to explore the conceptualization of DRINKS, EMOTIONS, FRIENDSHIP, and SUCCESS among young adults in Hungary, Jordan, and Türkiye. A total of 180 university students aged 18-20 listed examples for each category. The findings reveal both universal and culturally specific elements, showing how cultural values shape cognitive structure. HAPPINESS, SADNESS, and LOVE are universally recognized emotions, although differences were noted. DRINKS varied, with Hungarians focusing on ALCOHOLIC BEVERAGES, Jordanians focusing on TRADITIONAL HOT DRINKS, and Turks mentioning both. SUCCESS was tied to ACHIEVEMENT and HAPPINESS but varied by culture in its link to FINANCIAL STABILITY in Hungary, EDUCATION in Jordan, and EMOTIONAL FULFILLMENT in Türkiye. FRIENDSHIP was universally linked to TRUST, LOVE, and HAPPINESS with cultural nuances. This study offers insights into cultural linguistics by exploring how cultural contexts shape the perception and categorization of fundamental life concepts.

Keywords: Cognitive linguistics; Conceptualization; Categorization; Freelisting; Cross-cultural

1. Introduction

Cultural Domain Analysis (CDA), originating from cognitive anthropology, explores how members of a group organize and categorize knowledge and experiences within specific cultural contexts (Borofsky, 1987). Rooted in the mid-20th-century ethnoscience, with its foundations in the early research on scaling methods and cultural agreement analysis (Coombs et al., 1954; Romney et al., 1986), CDA has developed methods such as freelisting, which helps identify culturally salient items through the frequency of their mention (Trotter, 1981; Gatewood, 1983). These tools offer valuable insights into the shared cognitive structures of different cultural groups.

In parallel, Cognitive Linguistics, which emerged in the 1980s (Langacker, 1987), investigates how language, cognition, and culture interact. This field highlights the role of cultural schemas (e.g., D' Andrade, 1995; Sharifian 2011, 2017; Talmy, 1983.), cultural categories (Lakoff, 1987; Rosch, 1978), and metaphors (e.g., Lakoff and Johnson, 1980; Kövecses, 2000) in shaping linguistic meaning, showing how cognitive processes, such as categorization, are influenced by cultural environments, collective cognitive systems, and worldviews (Sharifian, 2011; 2017). Therefore, this study aims to explore how cultural contexts shape the perception and categorization of DRINKS, EMOTIONS, FRIENDSHIP, and SUCCESS among university students in Hungary, Jordan, and Türkiye. This study seeks to identify both universal and culturally specific elements within these conceptual categories using the freelisting method. Furthermore, the study aims to reveal similarities and differences across three diverse cultural groups.

2. Literature review

2.1. Conceptualization/ Categorization

Conceptualizations consist of sets of individually necessary and jointly sufficient conditions that provide a clear and unambiguous definition for determining whether an object fits within a concept (Margolis & Laurence, 1999; Murphy, 2002). Many scholars argue that language plays a significant role in shaping this process, with some even suggesting that, without language, there are no concepts at all (Joseph, 1996). This perspective, known as the language-first thesis, asserts that language is not just a medium for communication but also an essential tool for thought itself (Vicente & Martínez-Manrique, 2013). This view is often linked to the language-as-a-lens hypothesis, which suggests that different languages shape how we perceive and categorize the world by transforming pre-existing conceptual structures (Carey, 2009).

Perceptual information is categorized based on its connection to previously experienced or conceptualized categories, contextualizing new input through resemblance or comparison to stored mental frameworks (French, 1995; Hofstadter and Sander, 2013). This process allows for the interpretation of novel stimuli by relating them to existing knowledge and experiences in memory. Individuals' representations of everyday categories are grounded in their innate understanding of how the world is structured (Murphy & Medin 1985). Kubryakova et al. (1996) emphasize that categorization operates at the conceptual level, where comparisons between conceptual structures lead to judgments about category membership. Eleanor Rosch's studies have been particularly influential in the study of categorization. Rosch (1973, 1978) proposed that categories are not defined by a set of necessary and sufficient conditions, but rather by a prototype that serves as the

best or most typical example of a category. This cognitive process allows individuals to process complex information efficiently by grouping related objects or concepts, thereby simplifying recognition and decision-making. However, categorization is not merely about identifying similarities; it also involves comparing new experiences to prior ones and framing the way an experience is linguistically categorized and perceived (Langacker, 1987).

Although categorization is a universal cognitive process, its expression and structure are strongly influenced by cultural contexts. As Contreras Kallens et al. (2018) assert, the study of human categorization must account for the fact that humans, as a species, occupy a unique position within a complex cultural framework. This framework is manifested in an unparalleled capacity for communication and cooperative behavior, demonstrating a level of complexity unmatched by any other species. Language structures the world through innate linguistic faculties; however, languages vary significantly in their categorization of reality. Differences appear in spatial categories (Levinson & Brown, 1994; Majid et al., 2004), color perception (Kay et al., 2009), and kinship terms (Kemp & Regier, 2012). These variations demonstrate the interaction between universal linguistic principles and culturally specific semantics, showing how language influences cognition across cultures. Cultures have developed unique categories that reflect their environmental, historical, and social settings (Lucy, 1992). Ingram and Schneider (1993) further emphasize that social categories, while constructed, are often perceived as holding an objective reality that influences how individuals classify and interact with others in their cultural context. For instance, the interpretation of emotional signals is heavily influenced by contextual factors and culturally appropriate expressions within those contexts (Barrett et al., 2007). Describing others often depends on behaviors and contexts that are considered useful for prediction, with these being at least partially determined by cultural norms (Gurven et al., 2013). Many key categories in human culture emerge from cultural processes as cultures evolve and persist across generations through established mechanisms (Boyd & Richerson, 1985; Mesoudi, 2011; Turchin, 2003). Understanding human categorization often requires an explanation rooted in cultural evolution.

2.2. FreeListing Method

The freelisting method is widely used in anthropology, cognitive psychology, and linguistics to examine cross-cultural differences in categorization (Quinlan, 2017). Freelisting is a well-established ethnographic method that rests on three assumptions. First, people tend to list terms in order of familiarity, such as listing MOTHER before AUNT in kinship terms (Romney & D'Andrade, 1964). Second,

individuals more knowledgeable about a subject tend to list more items than those less knowledgeable (Brewer, 1995). Third, frequently mentioned terms indicate locally prominent items, such as Pennsylvanians listing APPLE and BIRCH trees more frequently than ORANGE or PALM trees (Gatewood, 1983).

Empirically, freelisting has been applied across a variety of cultural contexts, from understanding medicinal plant use to exploring the categorization of emotions, friendship, and social behaviors (Stanton et al., 1993; Trotter, 1981). Its simplicity lies in its ability to reveal shared cultural knowledge by focusing on collective, rather than individual, perceptions (Stausberg, 2021).

Freelisting is a qualitative and easily quantifiable method that quickly gathers data identifying items in a cultural domain, determining their salience, and revealing variation in knowledge or beliefs (Quinlan, 2005). In a freelist interview, respondents list items they perceive to be part of a domain. The frequency of items within lists, as well as the order in which they were listed, serves to determine their salience and the conceptual configuration of a domain (Borgatti, 1999). According to Quinlan (2017), this method taps into local knowledge and its variation within a community, making it well-suited for investigating cultural beliefs and practices.

2.3. The application of freelisting in cross-cultural contexts

This method has been demonstrated to be effective and adaptable in various studies. For instance, Purzycki et al. (2018) applied a freelist task across eight ethnographically diverse sites to assess cross-cultural mental representations of moral norms. Participants were asked to list what makes a "good" and "bad" person, enabling researchers to explore the importance of specific moral norms from the participants' perspectives without prior assumptions. This approach identified cross-culturally recurrent moral values, such as generosity and honesty, and linked individual freelist data with prosocial decision-making to infer the relationships between moral norms and behavior.

Similarly, Moraes et al. (2023) compared the perceptions of food healthiness in Brazil and Germany among 355 adults. Participants identified both natural and minimally processed foods (such as FRUITS, VEGETABLES, and FISH) as healthy, whereas convenience foods and ultra-processed items (such as SODA and FAST FOOD) were deemed unhealthy. Despite different dietary guidelines in the two countries, the categorization of FOODS was similar, displaying a shared understanding of what constitutes 'healthy' and 'unhealthy' foods based on nutritional content.

In another application, Girnyk et al. (2021) analyzed how the concept of CONFLICT is perceived and associated differently in Ukrainian and Indian cultures using a freelisting method among students from both countries. In India, associations

with CONFLICT were often related to emotional states such as ANGER and CONFUSION, along with social issues like discrimination. In contrast, in Ukraine, the concept was linked to negative interactions, such as ARGUMENTS and AGGRESSION, without ties to social or religious diversity. Despite these differences, core associations common to both cultures included words like FIGHT and MISUNDERSTANDING.

Additionally, Basile (2007) conducted a study comparing Europeans and North Americans to determine whether their perceptions of the best examples of categories such as VEHICLES, CLOTHES, VEGETABLES, and FURNITURE differ. The study used freelisting to capture participants' most salient examples for each category. Findings demonstrated that cultural factors influenced the selection of better examples. For instance, Europeans, who tend to use bicycles more frequently, considered BICYCLES to be better examples of the VEHICLES category, while North Americans viewed BICYCLES as a less central example. This finding underscores that the better-known objects are often those present in participants' daily lives. The study also highlighted some gender-based differences, comparing European and North American males and females. Despite these cultural variations, high-frequency examples showed consistency across both continents, which illustrates the flexibility of the freelisting method in capturing both universal and culturally specific category exemplars.

2.4. Exploring EMOTIONS, FRIENDSHIP, DRINKS, and SUCCESS across cultures

Culture plays a significant role in shaping conceptual categories, which reflect societal values, norms, and practices, and can vary significantly across cultures (Croft & Cruse, 2004).

Emotions: The debate on whether EMOTIONS are universal or culturally specific is ongoing, with some researchers emphasizing biological universality and others focusing on the social construction of the category EMOTIONS (Edelstein & Shaver, 2007). While Russell (1991) and Wierzbicka (1999) agree that basic emotions such as JOY and SADNESS are universally recognized, they, along with Ekman (1992), posit that the expression of these emotions is subject to cultural norms and display rules, which dictate appropriate emotional responses in different contexts. In alignment with this argument, Hareli et al. (2015) found that cultural norms influence whether emotions like ANGER or SADNESS are deemed suitable expressions in specific situations, with ANGER signaling norm violations in some cultures and SADNESS is used to seek empathy in others. Shaver & Mikulincer (2007) further demonstrate that while emotional experiences are shared across cultures, their categorization and prominence are shaped by local norms.

Empirical studies reinforce the universality of emotional experiences while acknowledging cultural differences in expression. In a cross-cultural study of 37 countries, Scherer and Wallbott (1994) found that emotions such as joy, fear, anger, sadness, and guilt exhibit consistent physiological and behavioral patterns across cultures. Similarly, Wong (2019) emphasizes that happiness, sadness, and love are universally recognized, although their expression varies across cultures.

Drinks: Studies on DRINKS have shown that food and beverage consumption habits are deeply rooted in cultural traditions and social practices (Counihan & Esterik, 2013). A cross-cultural study by Al Ajaleen & Al Khanji (2020) revealed that while WATER, COFFEE, and TEA are commonly consumed worldwide, Americans frequently listed ALCOHOL, reflecting cultural attitudes towards drinking, whereas Jordanians emphasized HERBAL DRINKS due to traditional medicine practices. According to Cherrier & Gurrieri (2012), alcohol consumption can also represent ethnic or cultural identity, signifying membership in a group. This is particularly true in cultures where specific alcoholic beverages are tied to social and communal practices, reflecting broader societal norms about drinking and social behavior.

Success: The concept is shaped by culture-specific motivations, with Eastern and Western societies differing significantly in their perceptions (Beishenova et al., 2024). In some cultures, SUCCESS is defined by FINANCIAL STABILITY, while others prioritize PERSONAL FULFILLMENT or EDUCATIONAL ACHIEVEMENT (Frenzel et al., 2009). These differing perspectives influence educational practices and societal motivations, with varying degrees of emphasis placed on success across different countries, religious communities, ethnic groups, and social classes. Loderer et al. (2020), in a study comparing students from Canada, Germany, Colombia, and China, found that while feelings associated with SUCCESS are similar across these cultures, the expressive features and expectations surrounding success vary significantly, highlighting that while SUCCESS is universally recognized, its expression is deeply influenced by cultural contexts.

Friendship: Many factors, such as personality, preferences, and cultural background, can influence friendship (Baumgarte, 2016). In English-speaking countries, the term “FRIEND” can be used loosely, sometimes referring to recent acquaintances, while other cultures have a more restrictive use of the term (Goodwin, 2013). Verkuyten (1996) highlights that in collectivist cultures, friendships tend to be closer and more enduring, with fewer but more profound connections. In contrast, individualist cultures often consider friendships more flexible, with adolescents describing friends using personal characteristics, having more friends, and engaging in less intimate conversations. Similarly, Keller (2004) found that Western cultures emphasize relationship closeness and high-quality

interactions, whereas other cultures, such as Chinese, may value friendships with fewer intimate interactions.

Investigating these four concepts in Jordanian, Turkish, and Hungarian contexts is particularly valuable due to several factors. These countries represent distinct cultural regions—Middle Eastern, West Asian, and Central European—providing diverse perspectives and rich cultural contexts. Their distinct histories, languages, socioeconomic conditions, and dominant religious and philosophical traditions are believed to contribute to varied conceptualizations. Additionally, these nations are underrepresented in cognitive and cultural research compared to WEIRD (Western, Educated, Industrialized, Rich, and Democratic) cultures, which limits the generalizability of findings and fails to capture potential sources of variability, limiting the understanding of human cognition (Bender & Beller, 2013; Gutchess & Rajaram, 2023).

The research questions addressed in this study are:

1. How do cultural contexts influence the categorization of FRIENDSHIP, SUCCESS, DRINKS, and EMOTIONS among young adults in Jordan, Hungary, and Türkiye?
2. What are the key similarities and differences in the categorization of these concepts among young adults from these three countries?

3. Methods

3.1. Participants

A total of 180 university students participated in this study, comprising 60 individuals each from Hungary, Jordan, and Türkiye. Weller & Romney (1988) state that 20–30 respondents are typically sufficient to gather necessary data, with larger sample sizes increasing result reliability. Participants were selected from capital cities—Budapest, Amman, and Ankara, respectively—representing diverse cultural backgrounds and linguistic contexts. The inclusion criteria encompassed individuals aged between 18 and 20 years, reflecting the young adult demographic. There was no specific restriction based on academic majors, ensuring a broad representation across disciplines. The demographic diversity aimed to comprehensively understand freelisting responses across different cultural and geographical contexts.

3.2. Data collection instrument

The data collection instrument for this study was a questionnaire developed using Google Forms, designed to facilitate a freelisting, adapted from Fehr and Russell (1984), to explore participants' perceptions of four key concepts: EMOTIONS, DRINKS, SUCCESS, and FRIENDSHIP. The questionnaire was divided into five

sections: the first section collected demographic information, while the remaining four sections focused on the key concepts under investigation. This structure allowed participants to list items or ideas that came to mind for each concept. The questionnaire was made available in the native language of the participants: Hungarian for those in Hungary, Arabic for participants from Jordan, and Turkish for those in Türkiye. The respective links to access these forms were as follows: [Turkish](#), [Hungarian](#), and [Jordanian](#).

3.3. Data collection procedure

Participants were asked to freely list as many examples and features as possible for EMOTIONS, DRINKS, SUCCESS, and FRIENDSHIP, with a minimum requirement of ten examples per category. Once a participant completed a section, they could proceed to the next, ensuring comprehensive responses for each concept. The collected responses were analyzed by grouping and classifying the examples and semantic features. Variations in syntax, morphology, and synonymous responses were consolidated to enhance clarity and simplify analysis. For example, terms like JOYFUL, JOYOUS, and JOY were grouped together. The frequency and percentage of each response were calculated to identify patterns and associations across participant responses.

3.4. Data analysis

After collecting responses from participants in Hungarian, Arabic, and Turkish through language-specific Google Forms, all data were translated into English and compiled into Excel spreadsheets. The translation process was overseen and verified by language specialists fluent in each language, who ensured that the translations reflected not just literal meanings but also the cultural and contextual nuances of each lexeme, even though complete semantic equivalence was not always possible. Each response was transferred and categorized for analysis. Salience in this study is measured by the items that are mentioned frequently (i.e., by many respondents). The top 20 most frequent words from each category across all three cultural groups were selected for further analysis. By focusing on the most frequently mentioned words, the study ensures comprehensive coverage of salient semantic associations within each concept from different cultural perspectives.

4. Findings and discussions

This section integrates the findings and discussion, providing a comprehensive exploration of how cultural contexts shape the vocabulary and thematic preferences of Hungarian, Jordanian, and Turkish participants across the four categories. The analysis reveals differences and commonalities in word usage and thematic emphasis among these diverse cultural groups.

Figure 1. Total number of words listed by participants for each category

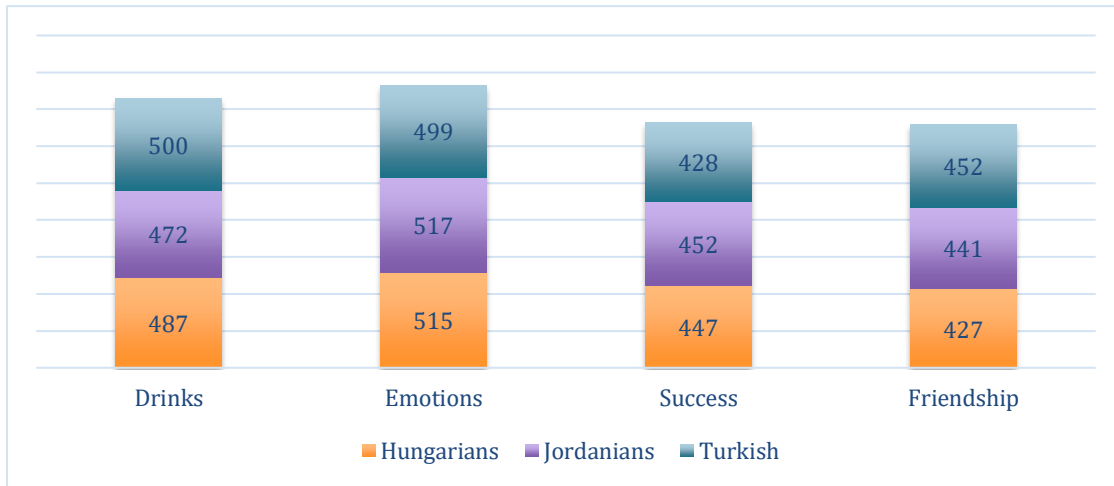
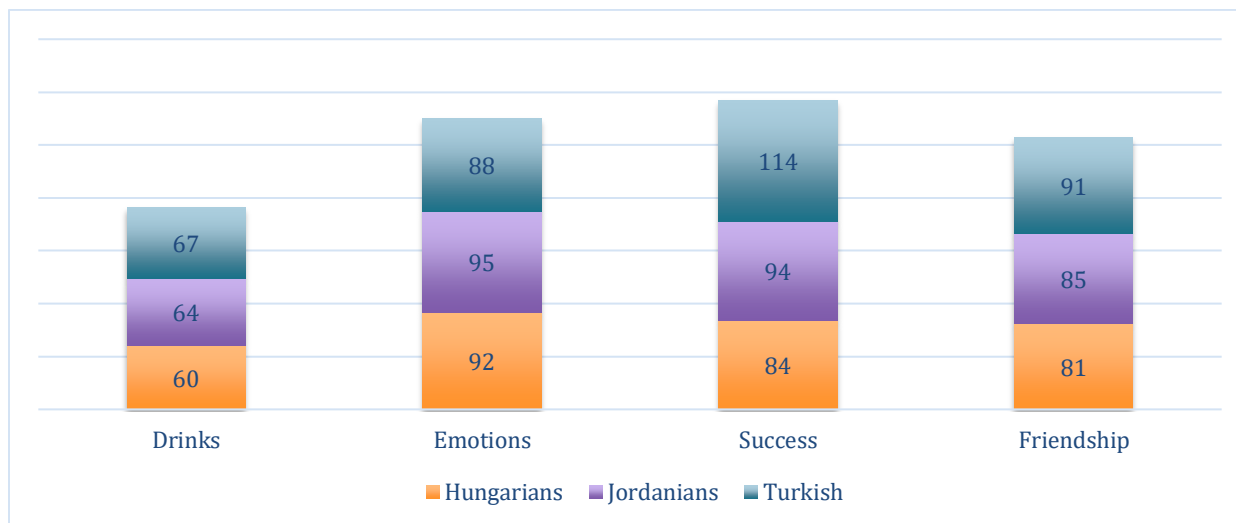


Figure 1 illustrates the contributions of Hungarian, Jordanian, and Turkish participants across four categories: DRINKS, EMOTIONS, SUCCESS, and FRIENDSHIP. From the data, we observe that Turkish participants tend to provide more words related to DRINKS and FRIENDSHIP compared to Hungarians and Jordanians. On the other hand, Jordanians contribute the most words in the EMOTIONS and SUCCESS categories. Hungarians, while not leading in any specific category, show consistent participation across all categories.

Figure 2 shows the diversity of vocabulary used by Hungarian, Jordanian, and Turkish participants across the four categories: DRINKS, EMOTIONS, SUCCESS, and FRIENDSHIP. Although the number of words varies between the three groups, they are very close to each other, indicating a similar level of engagement across these categories.

Figure 2: Number of different words listed by participants for each category



One notable observation is that the number of distinct words in the DRINKS category is significantly lower than in the other categories. This discrepancy can be attributed to the concrete nature of this category compared to the more abstract nature of EMOTIONS, SUCCESS, and FRIENDSHIP. This observation is supported by studies in cognitive and linguistic research (Banks & Connell 2021), stating that abstract categories generate a broader range of responses and involve more diverse contextual interpretations compared to concrete categories, contributing to their richer vocabulary.

4.1 Findings and discussions related to the concept of "Emotions"

Table 1. presents the top 20 emotion-related words mentioned by Hungarian, Jordanian, and Turkish participants, along with their frequencies and percentages of the total words listed in the category of Emotions.

Table 1: Top 20 emotion-related words mentioned by the participants

	Hungarian Mentions	Freq.	% of the total	Jordanian Mentions	Freq.	% of the total	Turkish Mentions	Freq.	% of the total
1	Happiness	50	9.71	Love	52	10.06	Sadness	58	11.62
2	Sadness	45	8.74	Happiness	49	9.48	Love	56	11.22
3	Love	38	7.38	Sadness	44	8.51	Happiness	54	10.82
4	Friendship	24	4.66	Laughter	30	5.8	Anger	50	10.02
5	Hatred	20	3.88	Hatred	28	5.42	Anxiety	39	7.82
6	Anger	21	4.08	Optimism	28	5.42	Excitement	30	6.01

7	Crying	20	3.88	Anger	26	5.03	Laughter	23	4.61
8	Family	16	3.11	Trust	24	4.64	Fear	21	4.21
9	Smile	12	2.33	Fear	23	4.45	Calmness	18	3.61
10	Anxiety	12	2.33	Depression	13	2.51	Generosity	10	2
11	Feeling/ Sentiment	14	2.72	Feeling/ Sentiment	12	2.32	Hatred	10	2
12	Mother	11	2.14	Anxiety	10	1.93	Missing	9	1.8
13	Loneliness	10	1.94	Tenderness	10	1.93	Crying	9	1.8
14	Boyfriend	10	1.94	Grief	10	1.93	Envy	8	1.6
15	Father	10	1.94	Envy	7	1.35	Compassion	7	1.4
16	Upset	9	1.75	Gratitude	7	1.35	Shame	7	1.4
17	Optimism	8	1.55	Hopelessness	7	1.35	Optimism	4	0.8
18	Nature	8	1.55	Confidence	6	1.16	Feeling/ Sentiment	4	0.8
19	Girlfriend	8	1.55	Determination	6	1.16	Success	4	0.8
20	Laughter	7	1.36	Missing	6	1.16	Grief	4	0.8

For all groups, the most frequently mentioned words are HAPPINESS, SADNESS, and LOVE, although the order varies. Jordanian participants most often mentioned LOVE, followed by HAPPINESS and SADNESS, while Turkish participants listed SADNESS, LOVE, and HAPPINESS in that order. Despite these differences in ranking, the prominence of these emotions across all three groups highlights their universal significance, transcending cultural boundaries. These findings align with previous research, which has shown that certain emotions, like HAPPINESS, SADNESS, and LOVE, are commonly recognized and expressed across cultures (Scherer & Wallbott, 1994; Wong, 2019; Wierzbicka, 1999). However, while these emotions are universal, their expression varies depending on the cultural context.

While there is a notable overlap in the top emotion-related words across the three groups, certain differences are evident. For instance, FRIENDSHIP appears prominently among Hungarians but is less frequently mentioned by Jordanians and Turks. Conversely, ANXIETY and ANGER are more prominent among Turkish participants compared to the other two groups. These differences reflect cultural variations in the expression of emotions, as different cultures regulate emotional responses based on social norms. (see Hareli et al., 2015; Ekman, 1992; Shaver & Mikulincer, 2007).

Furthermore, Hungarians tend to mention specific relational words like BOYFRIEND, MOTHER, GIRLFRIEND, FATHER, and FRIEND, indicating a possible cultural focus on specific personal relationships and their emotional impact. According to Baracsi (2016), the ability to interpret and express emotions within

personal relationships is a valued skill, reflecting the cultural importance of maintaining strong and supportive relational networks. Conversely, the lack of similar mentions among Jordanian and Turkish participants might suggest different interpretations of the task, where relational words were not as strongly associated with emotions.

4.2 Findings and discussions related to the concept of "Drinks"

Table 2 below presents the top 20 drink-related words mentioned by Hungarian, Jordanian, and Turkish participants, along with their frequencies and percentages of the total words listed in the category of Drinks. The data reflects both universal preferences for popular beverages like WATER and COCA-COLA and distinct cultural preferences for the category DRINKS.

Table 2: Top 20 drink-related words mentioned by the participants

	Hungarian Mentions	Freq.	% of the total	Jordanian Mentions	Freq.	% of the total	Turkish Mentions	Freq.	% of the total
1	Water	45	9.24%	Water	51	11.89	Coca Cola	46	9.20%
2	Alcohol	45	9.24%	Tea	50	11.65	Water	44	8.80%
3	Coca Cola	35	7.19%	Coffee	48	11.19	Mineral Water	40	8.00%
4	Friends	19	3.90%	Juice	36	8.39	Tea	36	7.20%
5	Tea	19	3.90%	Herbal Drinks	39	9.09	Ayran	35	7.00%
6	Party	17	3.49%	Milk	32	7.46	Coffee	33	6.60%
7	Beer	16	3.29%	Nescafe	26	6.06	Juice	28	5.60%
8	Coffee	15	3.08%	Soda	16	3.73	Fanta	25	5.00%
9	Fanta	14	2.87%	Energy Drinks	15	3.5	Turnip Water	25	5.00%
10	Wine	13	2.67%	Coca Cola	15	3.5	Lemonade	15	3.00%
11	Shot	13	2.67%	Cocktail	11	2.56	Milk	11	2.20%
12	Palinka	12	2.46%	Cold Drink	11	2.56	Energy Drink	10	2.00%
13	Music	11	2.26%	Hot Drinks	10	2.33	Whiskey	10	2.00%
14	Sprite	10	2.05%	Cappuccino	12	2.8	Glass/ Cup	9	1.80%
15	Juice	10	2.05%	Alcoholic Drinks	12	2.8	Café	8	1.60%
16	Dancing	9	1.85%	American Coffee	9	2.1	Beer	8	1.60%
17	Summer	9	1.85%	Iced Coffee	8	1.86	Iced Tea	7	1.40%
18	Black Out	9	1.85%	Soft Drink	8	1.86	Wine	7	1.40%
19	Milk	8	1.64%	Hot Chocolate	4	0.93	Sherbet	6	1.20%
20	Orange Juice	8	1.64%	Latte	2	0.47	Oralet (powdered fruit drink)	6	1.20%

In the Hungarian group, WATER and ALCOHOL were the top mentions, each with a frequency of 45 (9.24%), followed by Coca-Cola at 35 mentions (7.19%). Notable mentions also included alcoholic beverages like BEER (16, 3.29%), WINE (13, 2.67%), and PALINKA (12, 2.46%). Alcoholic beverages, particularly PALINKA, BEER, and WINE, hold significant cultural importance in Hungary and are closely associated with social and party-related contexts. PALINKA, a traditional Hungarian fruit spirit, is considered a Hungaricum (a product unique to Hungary) and is rooted in Hungarian cultural identity (Mucha et al., 2022).

The frequent mentions of alcoholic beverages highlight their cultural prominence and suggest a strong association between drinking and social gatherings. This finding is further supported by the presence of words like FRIENDS and PARTY, reinforcing the idea that drinking is an integral part of social interactions in Hungary. Bartram et al. (2017) emphasize the cultural norm of compulsory drinking, where declining to drink can lead to social pressure or even physical intimidation. Furthermore, Németh et al. (2011) note that communal drinking enhances alcohol's role in Hungarian socialization, highlighting its importance in strengthening relationships and shared experiences.

In the Jordanian group, traditional and hot beverages dominated the responses, with top mentions being WATER (51, 11.89%), TEA (50, 11.65%), and COFFEE (48, 11.19%). The high frequency of HERBAL DRINKS (39, 9.09%) and MILK (32, 7.46%) reflects a cultural preference for health-focused and traditional beverages, underscoring the cultural significance of tea and coffee in Jordan. Al Ajaleen & Al Khanji (2020) highlight the central role of tea and coffee in social practices and hospitality within Middle Eastern societies, where these drinks are essential components of social gatherings.

Additionally, HERBAL DRINKS such as SAGE, HIBISCUS, ANISE, CHAMOMILE, and CINNAMON are commonly consumed, especially during cold and flu season, reflecting their association with health and well-being. The relatively low mentions of alcoholic beverages among Jordanians can be attributed to the predominant religion, Islam, which prohibits the consumption of ALCOHOL. This religious prohibition significantly shapes drinking behavior, leading to lower consumption and fewer mentions of alcohol in the data. Furthermore, Alhashimi et al. (2018) suggest that social desirability bias may also influence the reporting of alcohol consumption, with many Jordanians potentially underreporting or avoiding mention of alcohol due to its social unacceptability in Jordanian society.

In the Turkish group, the top mentions are COCA-COLA (46, 9.20%), WATER (44, 8.80%), and SPARKLING MINERAL WATER (40, 8.00%). Traditional drinks like AYRAN (35, 7.00%) and TURNIP JUICE (25, 5.00%) are also prominent. This mix of modern and traditional drink preferences showcases a blend of cultural

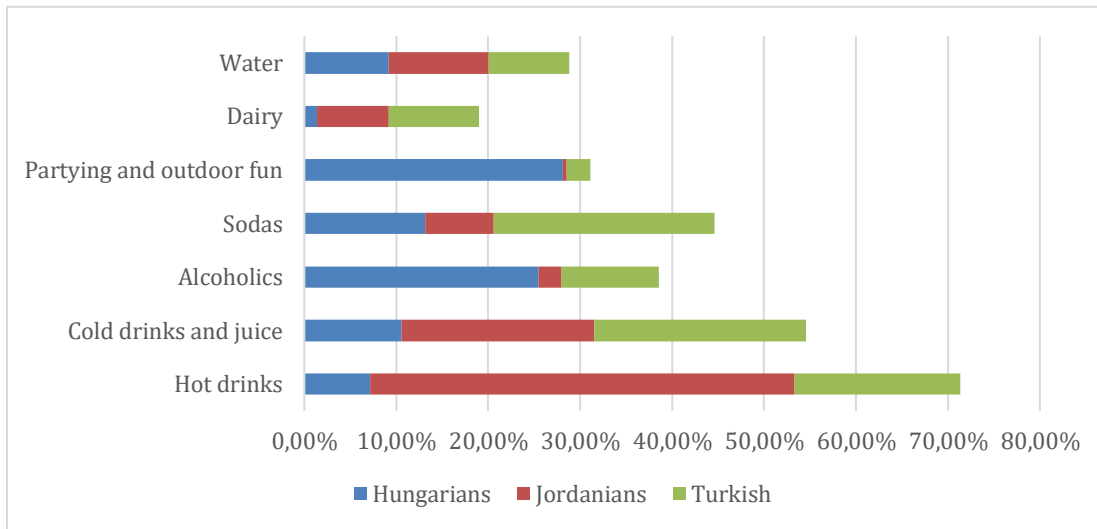
heritage and contemporary influences. A study examining fluid consumption patterns in central Türkiye found that young participants preferred carbonated soft drinks like COCA-COLA over traditional beverages such as AYRAN (Nergiz-Unal et al., 2017). AYRAN, a salty yoghurt drink, is commonly consumed alongside meals and is appreciated for its refreshing taste and probiotic properties. TURNIP JUICE, traditionally consumed with BBQ and variations of kebabs, also reflect the importance of fermented beverages in Turkish culture. Sparkling mineral water, such as BEYPAZARI, is very popular in Türkiye for its refreshing qualities and health benefits associated with its mineral content.

Additionally, while alcohol consumption in Türkiye is not as high as in Hungary, it is also not as low as in Jordan, with traditional Turkish alcoholic beverages like RAKI being mentioned. The attitude towards alcohol in Türkiye is complex, shaped by religious beliefs, social norms, and regulatory practices (Evered & Evered, 2016). While a significant portion of the population supports strict control or prohibition, practical measures and cultural acceptance vary widely across different demographics.

Much like in Jordan, Türkiye's hot beverage market is primarily dominated by TEA and COFFEE. For example, research by Onurlubaş et al. (2017) found that nearly half of the participants consume 0.5-1 kg of tea monthly, mostly BLACK TEA, which is typically enjoyed hot and sweetened. Arslan's (2019) study on coffee consumption in Türkiye showed that people prefer drinking coffee in the evening, mainly at home or at work, with TURKISH COFFEE being the most favored choice outside the home. The primary reason for coffee consumption is its taste, and younger individuals tend to visit coffee shops more frequently.

Figure 3. provides a visual representation of the categorization of various DRINKS. By clustering the drinks into main categories, such as HOT DRINKS, DAIRY, SODAS, and ALCOHOLIC BEVERAGES, the graph offers a more precise and intuitive understanding of the drinking habits among Hungarians, Jordanians, and Turkish individuals. This visualization aims to highlight the differences and similarities in drink preferences across these groups, making it easier to compare their consumption patterns at a glance.

Figure 3. Drinks clusters across Hungarian, Jordanian, and Turkish participants



4.3 Findings and discussions related to the concept of "Success"

Table 3 presents the top 20 success-related words mentioned by Hungarian, Jordanian, and Turkish participants, along with their frequencies and percentages of the total words listed for SUCCESS.

There are notable overlaps between the three groups in their perceptions of SUCCESS, reflecting some universal aspects of what it means to be successful. For example, HAPPINESS is a highly mentioned term in both the Hungarian (28, 6.59%) and Turkish (50, 12.08%) groups, indicating its importance across cultures. Similarly, JOB appears frequently in the Hungarian (34, 8%) and Jordanian (22, 5.13%) groups, emphasizing the significance of employment and career achievements. LEARNING is another common term, strongly represented in the Jordanian (55, 12.82%) and Turkish (14, 3.38%) groups, showcasing a shared value placed on education and knowledge.

Table 3: Top 20 success-related words mentioned by the participants

	Hungarian mentions	Freq.	% of the total	Jordanian mentions	Freq.	% of the total	Turkish mentions	Freq.	% of the total
1	Money	35	8.24	Learning	55	12.82	Happiness	50	12.08
2	Job	34	8	Hard work	49	11.42	Pride	48	11.59
3	Happiness	28	6.59	Achievement	40	9.32	Achievement	23	5.56
4	Reaching goals	26	6.12	Challenge	32	7.46	Perseverance	22	5.31
5	Home/ Family	25	5.88	Family/ Home	28	6.53	Planning	16	3.86

6	Learning	23	5.41	Job	22	5.13	Job	16	3.86
7	Wealth	22	5.18	Excellence	19	4.43	High Status	15	3.62
8	Car	20	4.71	Friends	17	3.96	Learning	14	3.38
9	Hard Work	18	4.24	Perseverance	16	3.73	Respect	13	3.14
10	Financial stability	15	3.53	Reaching goals	15	3.5	Historical and famous figures	13	3.14
11	Sports	15	3.53	University	14	3.26	Money	11	2.66
12	Luxury	14	3.29	Perseverance	14	3.26	Contentment	10	2.42
13	High status	13	3.06	Happiness	14	3.26	Ambition	9	2.17
14	Health	12	2.82	Passing exam	12	2.8	Ego	8	1.93
15	Social	12	2.82	Science	10	2.33	Reaching goals	8	1.93
16	Bachelor	10	2.35	Patience	10	2.33	Fame	8	1.93
17	Love	10	2.35	Money	8	1.86	Hard work	7	1.69
18	Graduation	9	2.12	Health	8	1.86	Peace	6	1.45
19	Peace	9	2.12	Graduation	9	2.1	Family/ Home	6	1.45
20	Passing Exam	8	1.88	Knowledge	8	1.86	Luxury	5	1.21

In the Hungarian group, the top mentions are MONEY (35, 8.24%), job (34, 8%), and HAPPINESS (28, 6.59%). Notable mentions also include REACHING GOALS (26, 6.12%), HOME/FAMILY (25, 5.88%), LEARNING (23, 5.41%), and WEALTH (22, 5.18%). The Hungarian participants place a significant emphasis on financial success and job-related achievements. The high frequency of words like MONEY, JOB, AND WEALTH indicates a strong association of success with financial stability and career accomplishments. It is supported by Kalleberg and Stark's (1993) study, noting that Hungarians place greater importance on economic incentives and the ability to maximize earnings through secondary jobs, reflecting their focus on financial success. Additionally, the mentions of HOME/FAMILY and HAPPINESS suggest that personal and familial well-being is also a key component of success, as these factors contribute to life satisfaction and stability.

In the Jordanian group, the top mentions are LEARNING (55, 12.82%), HARD WORK (49, 11.42%), and ACHIEVEMENT (40, 9.32%). Notable mentions also include CHALLENGE (32, 7.46%), FAMILY/HOME (28, 6.53%), JOB (22, 5.13%), and EXCELLENCE (19, 4.43%). For Jordanians, success is linked to education and personal effort. The high frequency of words like LEARNING, HARD WORK, and ACHIEVEMENT underscores the importance of educational attainment and perseverance. According to Bataineh et al. (2016), the education system in Jordan places significant emphasis on academic achievement, reflecting the cultural importance of education as a pathway to success. Additionally, the

mention of FAMILY/HOME indicates that familial support and stability are also considered essential to achieving success, as shown in a study by Rahamneh and Qudah (2016), affirming the vital role of the family in establishing intellectual security and stability, which are key components of success in Jordanian culture. Furthermore, the religious significance of maintaining strong family connections is highlighted, as family happiness and support are seen as integral to personal success.

In the Turkish group, the top mentions are HAPPINESS (50, 12.08%), PRIDE (48, 11.59%), and ACHIEVEMENT (23, 5.56%). Notable mentions also include PERSEVERANCE (22, 5.31%), PLANNING (16, 3.86%), JOB (16, 3.86%), and HIGH STATUS (15, 3.62%). Turkish participants associate success with emotional and personal fulfillment. The high frequency of words like HAPPINESS AND PRIDE suggests that success is not just about material achievements but also about personal satisfaction and dignity. Additionally, PLANNING and PERSEVERANCE are seen as crucial to achieving success, reflecting the importance of careful planning and persistent efforts. One more notable mention in the Turkish group is the mention of HISTORICAL AND FAMOUS FIGURES (13, 13.14%) such as ATATÜRK, FATİH SULTAN MEHMET, RONALDO, NAPOLEON, BALDWIN, KANUNI SULTAN SULEYMAN, OSMAN GAZI, ORHAN GAZI, GENGHIS KHAN, and MESSI suggests that success is often associated with notable achievements and legacy. These figures are recognized for their significant impact in various fields, such as leadership, sports, and historical influence. This difference from the other groups can be linked to the Turkish education system, where historical role models are introduced to students, emphasizing their characteristic traits (Karaboğa, 2019). Moreover, media organizations, with particular economic and cultural objectives, educate young people through popular figures such as footballers, influencing how they perceive social events, people, and life.

4.4 Findings and discussions related to the concept of "Friendship"

Table 4 presents the top 20 friendship-related words mentioned by Hungarian, Jordanian, and Turkish participants, along with their frequencies and percentages of the total words listed in the category of Friendship. Despite some cultural differences, FRIENDSHIP across all three groups shows notable similarities, with concepts like HAPPINESS, LOVE, and COUNTING ON SOMEONE or SUPPORT consistently mentioned, underscoring the universal importance of trust, emotional connection, and shared experiences in defining meaningful friendships.

Table 4: Top 20 friendship-related words mentioned by the participants

	Hungarian mentions	Freq.	% of the total	Jordanian mentions	Freq.	% of the total	Turkish mentions	Freq.	% of the total
1	Happiness	37	8.37	Brotherhood	34	7.76	Trust	31	7.24
2	Count on	23	5.2	Love	29	6.62	Fun	29	6.78
3	Support	20	4.52	Best friend	27	6.16	Happiness	24	5.61
4	Partying	20	4.52	Honesty	25	5.71	Love	22	5.14
5	Love	17	3.85	Count On	21	4.79	Friendship	20	4.67
6	Time Together	17	3.85	Loyalty	21	4.79	Brotherhood	18	4.21
7	Laughter	16	3.62	Happiness	18	4.11	Friends' names	18	4.21
8	Sports/ Football	16	3.62	Fulfillment	18	4.11	Best friend	16	3.74
9	Special Bond	15	3.39	Comfort	16	3.65	Respect	15	3.5
10	Concerts/ Events	15	3.39	Advice	15	3.42	Time together	15	3.5
11	Fun	14	3.17	Trust	14	3.2	Sharing	13	3.04
12	Playfulness	14	3.17	Connections	13	2.97	Loyalty	12	2.8
13	Honesty	12	2.71	Count On	12	2.74	Support	12	2.8
14	Trust	12	2.71	Support	10	2.28	Peace	11	2.57
15	Best friend	12	2.71	Success	9	2.05	Mutual talk	11	2.57
16	Loyalty	12	2.71	Mutual talk	8	1.83	Understanding	8	1.87
17	Hangout	11	2.49	Respect	7	1.6	Honesty	7	1.64
18	Mutual Talk	10	2.26	Asylum	7	1.6	Help	7	1.64
19	University	10	2.26	Irreplaceable	7	1.6	Count On	7	1.64
20	Kindness	9	2.04	Playfulness	7	1.6	Mutual interest	6	1.4

In the Hungarian group, the top mentions are HAPPINESS (37, 8.37%), COUNT ON someone (23, 5.2%), SUPPORT (20, 4.52%), and PARTYING (20, 4.52%). Notable mentions also include LOVE (17, 3.85%), TIME TOGETHER (17, 3.85%), LAUGHTER (16, 3.62%), and SPORTS/FOOTBALL (16, 3.62%). For Hungarians, FRIENDSHIP is strongly associated with positive emotions and social activities. Compared to other groups, Hungarians seem to associate quality time more with activities such as concerts, parties, and sports events. This aligns with Westerners, who, according to Keller (2004), place so much importance on quality interactions. Social activities such as PARTYING AND SPORTS/FOOTBALL are important contexts for building and maintaining friendships. Additionally, Wagner et al. (2014) note that the social sharing of emotions enhances friendships by improving subjective feelings and activating the neural reward circuitry, underscoring the

importance of shared experiences in strengthening friendships across cultures. The high frequency of words like COUNTING ON SOMEONE and SUPPORT suggests that trust and reliability are key components of friendships.

In the Jordanian group, the top mentions are BROTHERHOOD (34, 7.76%), LOVE (29, 6.62%), and BFF (27, 6.16%). Notable mentions also include HONESTY (25, 5.71%), COUNT ON someone (21, 4.79%), LOYALTY (21, 4.79%), and HAPPINESS (18, 4.11%). For Jordanians, FRIENDSHIP is closely linked to deep, familial-like bonds. The frequent mention of BROTHERHOOD and BEST FRIEND reflects the strong, intimate connections valued in friendships. Words like "honesty," "count on," and "loyalty" indicate that trust and dependability are essential in the Jordanian group. Additionally, FULFILLMENT in friendships underscores the importance of mutual support and satisfaction. According to Nasser El-Dine (2018), the material and emotional dimensions of love and care are integral to relationship dynamics and defining successful relationships in Jordan.

In the Turkish group, the top mentions are TRUST (31, 7.24%), FUN (29, 6.78%), and HAPPINESS (24, 5.61%). Notable mentions also include LOVE (22, 5.14%), REAL FRIENDS (20, 4.67%), BROTHERHOOD (18, 4.21%), and NAMING THEIR FRIENDS (18, 4.21%). Turkish participants emphasize trust and enjoyment in friendships. The high frequency of words such as TRUST, FUN, and HAPPINESS suggests that a successful friendship involves both reliable and enjoyable experiences. The mention of REAL FRIENDS, BROTHERHOOD, and FRIENDS NAMES highlights the value placed on genuine close relationships. Turkish and Jordanian groups frequently mentioned brotherhood and sisterhood in the context of friendship, whereas Hungarians did not. In Islam, the Quran refers to faithful people as brothers and sisters, which can be understood as a cultural aspect. Demir et al. (2012) state that the quality of friendships significantly contributes to happiness and life satisfaction in Türkiye, underscoring the importance of trust and emotional connections in these relationships.

While the findings presented in this study provide valuable insights into the cultural categorization of drinks, emotions, friendship, and success among young adults in Hungary, Jordan, and Türkiye, they do not encompass all the intriguing words and concepts mentioned by participants. These three groups, representing distinct cultural contexts, offer a fascinating perspective on how cultural values and societal norms influence conceptual structures. By examining the diverse vocabulary and thematic emphases across these groups, this study has successfully highlighted the differences and commonalities in cultural perceptions. This diversity underscores the richness of cultural cognition and emphasizes the importance of examining cultural differences to gain an understanding of human categorization and shed light on how culture shapes our understanding of fundamental concepts.

Conclusion

The application of the freelisting method in this study has successfully highlighted both universal and culturally specific elements in the conceptualization of DRINKS, EMOTIONS, FRIENDSHIP, and SUCCESS among young adults in Hungary, Jordan, and Türkiye. The results demonstrate that while emotions such as HAPPINESS, SADNESS, and LOVE are universally recognized, differences emerged in other emotional expressions, such as ANGER being more prominent in Türkiye and ANXIETY in Jordan. In terms of DRINKS, the categorization reflects distinct cultural and religious preferences and societal norms, with Hungarians predominantly mentioning ALCOHOLIC BEVERAGES, Jordanians emphasizing TRADITIONAL AND HEALTH-FOCUSED DRINKS, and Turkish participants associating drinks with both ALCOHOLIC AND TRADITIONAL BEVERAGES. SUCCESS showed universal recognition of ACHIEVEMENT, but culturally specific aspects were linked to FINANCIAL STABILITY in Hungary, EDUCATIONAL ACHIEVEMENTS in Jordan, and EMOTIONAL FULFILLMENT in Türkiye. Friendship also exhibited universal values of TRUST, LOVE, and HAPPINESS and cultural nuances, with Hungarians focusing on POSITIVE EMOTIONS and SOCIAL ACTIVITIES, Jordanians on deep FAMILIAL BONDS, and Turks on TRUST as well as ENJOYMENT. Overall, the study offers a straightforward yet powerful approach to uncovering the shared and divergent ways in which people from different cultures categorize and relate to their environment. The study shows that even in our increasingly globalized world, where people wear the same brands, watch the same shows, and are influenced by the same people, young individuals still interpret various conceptual domains through the lens of their unique cultural heritage. The insights gained from this study contribute to a broader understanding of cultural influences on cognition and language and can inform further research in sensory and consumer science, particularly in developing culturally relevant descriptors and preferences.

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